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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,571	08/20/2001	Brian R. Hoppes	74035.P0006	5747
30163	7590	08/16/2005	EXAMINER	
JOHNSON & ASSOCIATES			MEEK, JACOB M	
PO BOX 90698			ART UNIT	
AUSTIN, TX 78709-0698			PAPER NUMBER	
			2637	

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/933,571

Applicant(s)

HOPPE, BRIAN R.

Examiner

Jacob Meek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 20, 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 - 18 is/are allowed.
- 6) ☒ Claim(s) 1 - 11, 20, 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                         |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                             | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see pages 7 & 8, filed 5/31/2005, with respect to the rejection(s) of independent claim(s) 1, 12, 19, and 20 under USC 102 have been fully considered and are persuasive in view of amended claims. Therefore, the rejection of claims 1 - 22 has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lehtimäki (US-5,953,666) in view of ETSI with regard to amended claims.

### ***Claim Objections***

2. Claim 22 objected to because of the following informalities: Claim 22 depends from cancelled claim 21. Appropriate correction is required.
3. Claim 1 objected to because of the following informalities: Claim 1, 2<sup>nd</sup> limitation states "form a plurality potential message channels". This appears to be missing a modifier between plurality and potential.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 1 – 8, 11, 19, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtimäki (US-5,953,666) in view of ETSI TS 101 504 V8.0.0 (2000-04).

With regard to claim 1, Lehtimäki discloses a method of synchronization of an in-band signal (where TRAU is defined as part of the in-band signaling associated with TFO per ETSI standards) comprising collecting in-band signaling information (see Figure 2, and column 4, lines 29 – 34) to form a plurality potential message channels (see column 4, lines 34 – 37), determining which of the plurality of potential message channels relates to a desired message channel (see column 5, lines 1 – 4). Lehtimäki is silent on the details of his synchronizing operation. ETSI discloses synchronizing the signaling based on collected information, and continuing to collect signaling information and using the collected inband signaling information to maintain the plurality potential message channels while system is synchronized for resynchronization if synchronization is lost (page 27, section 8.4.1). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the ETSI standard in wireless system to produce GSM compliant wireless system.

With regard to claim 2, Lehtimäki discloses that in-band signaling information is compromised of bits taken from samples of in-band signaling channel (see figure 2, where this is a representation of the in-band signaling scheme and column 5, lines 1 - 21).

With regard to claim 3, Lehtimäki discloses a plurality of sample grids are filled with bits taken form samples in the signaling channel (see figure 4, RXDTX handler and column 4, lines 34 - 38).

With regard to claim 4, Lehtimäki discloses a plurality of sample grids are maintained during the time in-band signaling system is synchronized (see column 4, lines 39 - 56).

With regard to claim 5, Lehtimäki discloses the step of generating an in-band message channel from the collected bits (see column 10, lines 31 –67).

With regard to claim 6, Lehtimäki discloses the step of generating a second in-band message from the collected bits (see column 4, lines 29 – 37 where this is interpreted as equivalent).

With regard to claim 7, Lehtimäki discloses inband signaling is a GSM speech network (see column 4, lines 16 – 28).

With regard to claim 8, Lehtimäki teaches inband signaling is part of GSM (see column 4, lines 16 – 28), which is defined as a TDMA based system by industry standards and is inherent for GSM based systems.

With regard to claim 11, Lehtimäki discloses his system facilitates TFO operation (see column 1, lines 65 – 67).

With regard to claim 19, Lehtimäki discloses a TFO in-band signaling synchronization system comprising: a storage device that maintains a plurality of sample grids wherein samples are collected from a signaling channel and are used to fill the plurality of sample grids (see figure 4, RXDTX handler and column 4, lines 34 - 38); and a detector that detects the presence of an in-band signaling channel based on the contents of the sample grids, wherein detected in-band signaling channel is used to synchronize devices to facilitate TFO, and wherein collection of samples continues during synchronization to maintain a plurality of sample grids (see column 4, lines 38 – 58 and column 6, lines 39 – 56 where Lehtimäki is stores data, and could be considered a sample grid). Lehtimäki is silent on the details of his synchronizing operation. ETSI discloses synchronizing the signaling based on collected information, and continuing to collect signaling information and using the collected in-band signaling information to maintain the plurality potential message channels while system is

synchronized for resynchronization if synchronization is lost (page 27, section 8.4.1). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the ETSI standard in wireless system to produce GSM compliant wireless system.

With regard to claim 20, Lehtimäki discloses a method of maintaining synchronization of an in-band signal (see column 4, lines 29 – 37 where TRAU is defined as part of the in-band signaling associated with TFO per ETSI standards) comprising the steps of: providing a synchronization technique of synchronizing one or more devices in an in-band synchronization system (see column 3 line 48 – column 4, line 8 where this is understood as inclusive of cited ETSI documents), wherein the synchronization technique involves the collection of bits from a signaling channel (see figure 4, RXDTX handler and column 4, lines 34 - 38) and filling a plurality of sample grids with the collected bits to provide a plurality of possible sample grids (see column 4, lines 38 – 58 and column 6, lines 39 – 56 where Lehtimäki is stores data, and could be considered a sample grid), applying the synchronization technique to the in-band signaling system to synchronize one or more devices (see column 3 line 48 – column 4, line 8 where this is understood as inclusive of cited ETSI documents), and continuing to apply synchronization technique while one or more devices are synchronized in order to facilitate rapid resynchronization of one or more devices if synchronization is lost (see column 6, lines 39 – 56 where this , and ETSI disclosures is interpreted as equivalent). Lehtimäki is silent on the details of his synchronizing operation. ETSI discloses synchronizing the signaling based on collected information, and continuing to collect signaling information and using the collected in-band signaling information to maintain the plurality potential message channels while system is synchronized for resynchronization if synchronization is lost (page 27, section 8.4.1). It would have been obvious to one of

ordinary skill in the art at the time of invention to incorporate the ETSI standard in wireless system to produce GSM compliant wireless system.

With regard to claim 22, Lehtimäki discloses collection of bits continues while one or more devices are synchronized (see column 4, lines 39 - 56).

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtimäki (US-5,953,666) in view of ETSI TS 101 504 V8.0.0 (2000-04) in further view of Meyer (US-6,577,645).

With regard to claim 9, Lehtimäki is silent with respect to an inband signaling being part of a CDMA speech network, but discloses his invention is useful in digital mobile communications (see column 3, lines 24 – 32). Meyer teaches a method of inband signaling (see column 2, lines 45 – 51 where this is interpreted as equivalent to TFO functionality) that is useful in CDMA (see column 7, lines 10 – 16). It would have been obvious to one of ordinary skill in the art at the time of invention to combine Lehtimäki's synchronization technique with Meyer's communication technique to produce a device that would provide a more flexible and bandwidth efficient system (see '645, column 1, lines 17 - 23).

With regard to claim 10, Lehtimäki is silent with respect to an inband signaling being part of a W-CDMA speech network, but discloses his invention is useful in digital mobile communications (see column 3, lines 24 – 32). Meyer teaches a method of inband signaling (see column 2, lines 45 – 51 where this is interpreted as equivalent to TFO functionality) that is useful in W-CDMA (see column 7, lines 10 – 16). It would have been obvious to one of ordinary skill in the art at the time of invention to combine Lehtimäki's synchronization technique with Meyer's communication technique to produce a device that would provide a more flexible and bandwidth efficient system (see '645, column 1, lines 17 - 23).

***Allowable Subject Matter***

6. Claims 12 – 18 are allowed.
7. The following is an examiner's statement of reasons for allowance:

In view of applicant's amendment to claims, review of previously cited prior art and additional search does not indicate prior art that anticipates or renders obvious applicant's claimed invention.

***Other Cited Prior Art***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Solve (US-5,905,733), Borneman (US-6,553,041), and Ralf (US-6,556,844) all disclose aspects of in-band synchronization. ETSI standards are cited to show requirements basis of implementation.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



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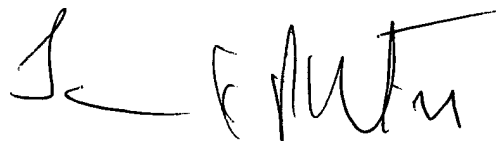
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM



JAY K. PATEL  
SUPERVISORY PATENT EXAMINER